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STATISTICAL BULLETIN

METROPOLITAN LIFE INSURANCE COMPANY

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Growth of American Cities in the Last Decade

THE 1940 Census has revealed a marked change in the growth of American cities with a population of 25,000 or more. Over the course of our history our cities have, on the whole, shown a rapid growth, usually in excess of that for the population as a whole; but the past decade shows a decided halt in this trend. Census returns are not yet available for metropolitan areas, which will include figures for the population in the territory immediately surrounding our large cities, and not until these appear shall we know definitely all the facts regarding the distribution of population in and around those areas. So far as the cities themselves are concerned, however, many show decreases in population, or comparatively insignificant gains. The preliminary returns* show 412 cities to have a population of 25,000 or more *in 1940*. The aggregate population in these communities was 52,536,000, a gain of only 5.0 percent since 1930. In contrast, a gain five times as great, 25.5 percent, was recorded for these cities in the preceding 10-year period.

*Up to September 23, 1940.

Of even greater significance than this finding is the fact that the rate of growth of these cities has been smaller in the past decade than that of the country as a whole. As compared with the gain of 5.0 percent in their population between 1930 and 1940, the population of the country has shown an increase of 7.0 percent. This is the reverse of the situation in the preceding decade, when these cities gained 25.5 percent, while the country as a whole gained 16.1 percent. The trend toward urbanization, which has been so striking in past decades, is clearly coming to a stop.

The general picture of the situation over the country at large, as revealed by these preliminary returns, is given by the map on page 3 which shows the percent change in aggregate population of cities of 25,000 or more for each State. The first thing of interest is that in four of the 46 States which had cities of this size in 1940, the population of these cities has actually *decreased* since the last Census, the largest numerical decline being reported for New Jersey. Small increases, of less

than 2 percent, were recorded in four additional States and, if New York City is excluded, up-State New York also belongs in this category. Indeed, the whole Middle Atlantic region, New York City excluded, shows a loss in the number of persons living in cities of 25,000 or more.

On the other hand, comparatively large gains have been made in some areas. The best record is for the Southern tier of States, in every one of which the combined population of cities of 25,000 or more has increased 10 percent or more during the past decade. Florida's gain is largest—namely, 36.4 percent. A curious anomaly is the moderate growth of cities in this class in certain States, parts of which are in the "Dust Bowl" area—the Dakotas, Nebraska, Kansas, and Oklahoma—inasmuch as the total populations in each of these States declined during the past decade. Thus, the migration initiated by the long drought and the dust storms in this area was in two directions, in part to the cities within the area and in part to other States.

The slackening in the rate of growth of cities of 25,000 or more may be further elucidated by comparing the percentage increases between 1930 and 1940 in the populations of such cities, with similar figures for the decade 1920–1930. In 108 cities, or more than one fourth of the total, the population declined in the last 10 years, but only 23 cities had shown decreases in the preceding decade. Moreover, between 1930 and 1940 only 35 cities showed increases of as much as 25 percent, as compared with 202 cities in the decade preceding. Furthermore, in contrast with the 48 cities which doubled or more than doubled their population between 1920 and 1930, only three cities gained thus rapidly in the decade just closed.

This new trend applies even to the highest ranking cities of the country. Of the 10 largest, the population decreased in five—Philadelphia, Cleveland, St. Louis, Boston, and Pittsburgh — and in Chicago the increase was negligible, about ¼ of 1 percent. Of the next 15 ranking cities as of 1930, no less than four lost population, and in six others the gains were less than 2 percent. Thus, the record of the 25 largest cities of 1930 shows that nine lost population and seven gained only slightly. Furthermore, two of the cities were displaced from the select list of the 25 largest in the country.

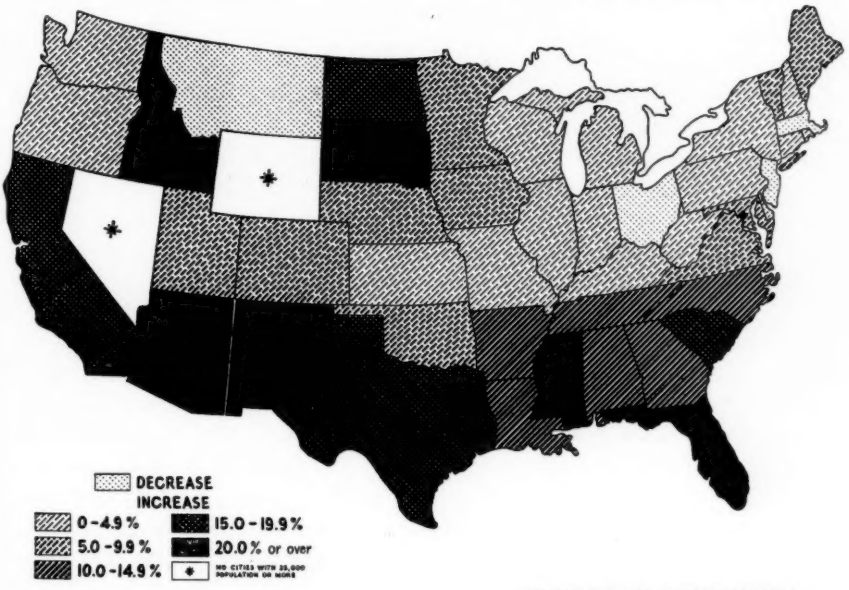
Among our leading cities, New York City made the largest absolute gain, but Washington the largest relative gain, namely, 36.2 percent. Furthermore, Washington advanced from 14th in size in 1930 to 11th in 1940. Indeed, these figures really understate the growth of population of our national capital, because the number of residents in counties of Maryland and Virginia close to the city, has increased 61.7 percent, which is much more than the rise for the city itself.

Of the cities of lesser size, a few

call for special comment. The highest rate of growth—321.0 percent — was recorded for Miami Beach, Fla., while Miami itself increased 54.4 percent. The only other cities of 25,000 or more to double or more than double their population were Corpus Christi, Tex., and Burbank, Calif. Austin, Tex., with an increase of 65.4 percent, made the best gain of the moderate-sized cities. Other notable increases were recorded by Jacksonville (34.6 percent), San Diego (36.5 percent), and Houston (32.1 percent).

The change in the growth of our cities reflects the working of a number of factors, some of which are national in scope, others of more or less local significance. Probably the most important single factor, affecting city and country alike, is the decline in the birth rate during the past decade. Next in importance is the virtual cessation of immigration during a large part of the decade, in some years of which an actual excess of emigration took place. The long economic depression has likewise exerted its influence. This is probably seen most clearly in the declining population of certain cities in the Middle West, which had experienced rapid growth during the preceding decade. Technological changes in industry and the partial displacement of coal by oil have been reflected, on the one hand, by general declines in the

GEOGRAPHIC DISTRIBUTION OF PERCENT GAINS AND LOSSES OF POPULATION FROM 1930 TO 1940 IN CITIES OF 25,000 OR MORE IN 1940



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population of certain Eastern and Midwestern cities dependent on steel manufacturing or coal mining, and, on the other hand, by the rise in population, particularly in the Southwest, of cities largely dependent on the oil industry. The discovery of new oil fields and the vastly increased demand for petroleum products has likewise been a factor in the latter region. There has also been some relocation of industry from large cities to smaller ones or to new regions. Florida's outstanding growth of urban population is partly explained by its increased popularity as a winter vacation center, by the accelerated influx of retired persons, and by the great expansion in agricultural production, particularly citrus fruits and vegetables, in areas served by these cities. This applies in some degree also to California.

But everywhere a factor tending to curb the growth of cities is the automobile. The increased numbers in use, their improved reliability and performance, and the consequent development of highway systems near our cities, have enabled working people conveniently to travel greater distances, by auto or bus, to and from work. As a result, all over the country the population in suburban areas outside the large and even moderate-sized cities has grown rapidly, while the cities themselves have experienced little gain or have even decreased in size.

This outstanding change in the relative growth of our cities has most important implications in every branch of our national economy. By and large this trend means that the mushroom growth of our cities is practically at an end. Not the least of the problems resulting from this change are those confronting our municipal governments. Comparative stability of city populations must bring about a revolution in the thinking and planning by municipal authorities. First and foremost, the budget and tax systems must be reconsidered in the light of this trend. Projects for municipal improvements, which, in the past, have been based on the expectation of increasing populations and consequently larger tax bases, must now be more carefully scrutinized. Greater attention can now be directed to housing problems, because, with populations no longer expanding rapidly, there is less excuse than ever for the large slum areas which disgrace so many of our cities, old and new.

It is opportune also to point out that while the total populations are changing little, there are marked changes in the internal composition of these populations. There are fewer youngsters and more old people. Consequently, thought must be given anew to the ways in which local moneys are to be spent. Need for new school construction may be less than in the past. Opportunities for employment in the field of school teaching may be diminished. On the other hand, increasing provision must be made for certain typical needs of adults.

Our cities in the future should

take on a more attractive appearance. They will have increasing opportunity to develop institutions devoted to the fine arts and the intellectual interests of their more mature populations. Even moderate-sized cities should now be able to afford modern public auditoriums, which can serve as the home of local symphony orchestras, opera companies, and theaters, and museums and fine public buildings. The development of these activities, which most American cities have seriously neglected hitherto or in which standards of taste often have been low, befits the coming of age of our cities.

"Safety for National Defense"

SAFETY first for the Nation, in time of preparation for national defense, may involve the sacrificing, in some degree, of safety for the individual. In the service of their country, men and women at such times willingly undertake tasks more hazardous than those of their usual calling. One thing leading to another, there is a tendency in these circumstances for the development of a psychology of heedlessness, even perhaps of a feeling that it would be ignoble to count too closely the risks of one's occupation and everyday life when others are offering their services, and if need be their lives, in the armed forces. These remarks are not mere speculations, but are based on the recollection of what happened during the last World War in the years when this country was engaged, first in the manufacture of the sinews of war, and later in actual fighting. In 1915 our fatal accident rate was 76.6 per 100,000. This rose to 84.2 in 1916 and to 88.2 in 1917, with some remission to 82.3 in 1918. The high figure reached in 1917 has not been touched again since.

The rise in the fatal accident rate that was observed during the last World War was, of course, due partly to the direct effect of increased industrial activity, accompanied in some cases by increased hazards. But those who were in close contact with the work know that, in addition to these unavoidable new hazards, there was a tendency for a certain degree of bravado, of disregard for some of those measures of caution which ordinarily are not lightly waved aside. In the months that lie ahead, it will be necessary to guard against any such attitude, which, if it should become widespread, would cause an increase in the wastage of life and limb, and also of time, through accidental injuries. We can ill afford any such condition as this when the general speeding up of industrial processes and the entrance of large numbers of inexperienced workers into new occupations inevitably introduce their own particular dangers. Furthermore, the very presence of these new hazards will tend to impede our efforts for the necessary speeding

up of industry, unless our accident-prevention program is built up to meet the added difficulties imposed by the emergency. The tendency towards a general pyschology of heedlessness may also have the further result of increasing not only occupational accidents, but also those not related to industrial occupation, and this would further weaken our national efficiency.

Fortunately, the lesson of our past experience has not been forgotten. Our official and nonofficial bodies concerned with health and life conservation are alive to the dangers of the situation. The Federal Government has taken steps to protect the lives of industrial workmen under the Nation's emergency defense program. Information designed to prevent the death and injury of trained and skilled workers will be disseminated on request to all industries working on Government contracts. The National Safety Council, which will meet in Chicago the week of October 6th, has taken for its convention theme "Safety for National Defense." No subject could be more timely.

Mechanical safeguards, plant *esprit de corps*, plant discipline—all can play a part; but no feature of a well thought out program seems of more importance now than the design to fix in the minds of all the fact that recklessness in regard to personal safety at this time will defeat the very ends for which we are striving. More than ever we should be on our guard against accidents.

The Control of Disease in Adolescence and Early Adult Life

EACH of the successive stages in life has its own outstanding characteristic mortality. Infant and childhood mortality have been reviewed in previous issues of this BULLETIN. Following the same sequence, this would now lead to a consideration of mortality and the control of disease in adolescence and early adult life, a section of the population on whom interest is particularly centered today, because in it are to be found the males who will be asked within the next few years to prepare themselves actively for the defense of their country.

The rapid improvement in mortality which was noted in the case of the younger age groups in earlier issues of the BULLETIN* has also been shared, although in somewhat lesser degree, by the age group 15 to 24 years. So, for instance, among the Industrial policyholders of the Metropolitan Life Insurance Company, the death rate of white males at these ages in 1939 was 1.8 per 1,000, or only one third of the rate of 5.4 per 1,000 observed in 1911, the first year of our series of annual records. The improvement was even greater among white females, for

*For discussions of the trend of mortality, by cause of death, in infancy and in the childhood ages, see the STATISTICAL BULLETINS of July 1939 and June 1940.

among them the rate in 1939 (1.3 per 1,000) was little more than one quarter of the figure for 1911 (4.9 per 1,000). Details regarding the changes that have taken place in the more important causes of death that enter into the total death rate at these ages during the period from 1911 to 1939 are shown graphically in the chart on page 8.*

By far the outstanding feature in the improvement of mortality among adolescents and young adults during the last three decades has been the control of tuberculosis. Starting with a death rate of 222 per 100,000, the curve for white males runs diagonally across the chart to a minimum of 19 per 100,000 in 1939, the latest year of the series. Here, the improvement has been so rapid that, within one generation, the death rate is reduced to less than one tenth of the initial value. Among white females, the reduction in the death rate from tuberculosis has been a little less rapid. In 1939 they had a death rate of 30 per 100,000, about one seventh of their rate of 221 per 100,000 in 1911.

About 40 percent of all deaths of adolescent and young adult males in 1911 were from tuberculosis; in 1939 only 11 percent of all deaths were from this cause. The corresponding figures for white females are 45 percent and 23 percent respectively. Except for the year of the influenza pandemic, 1918, tuberculosis ranked first as a cause of death for white females of ages 15 to 24 throughout the period under survey. Among white males, tuberculosis ranked first up through 1923 (except for 1918 and 1919) and then fell below accidents.

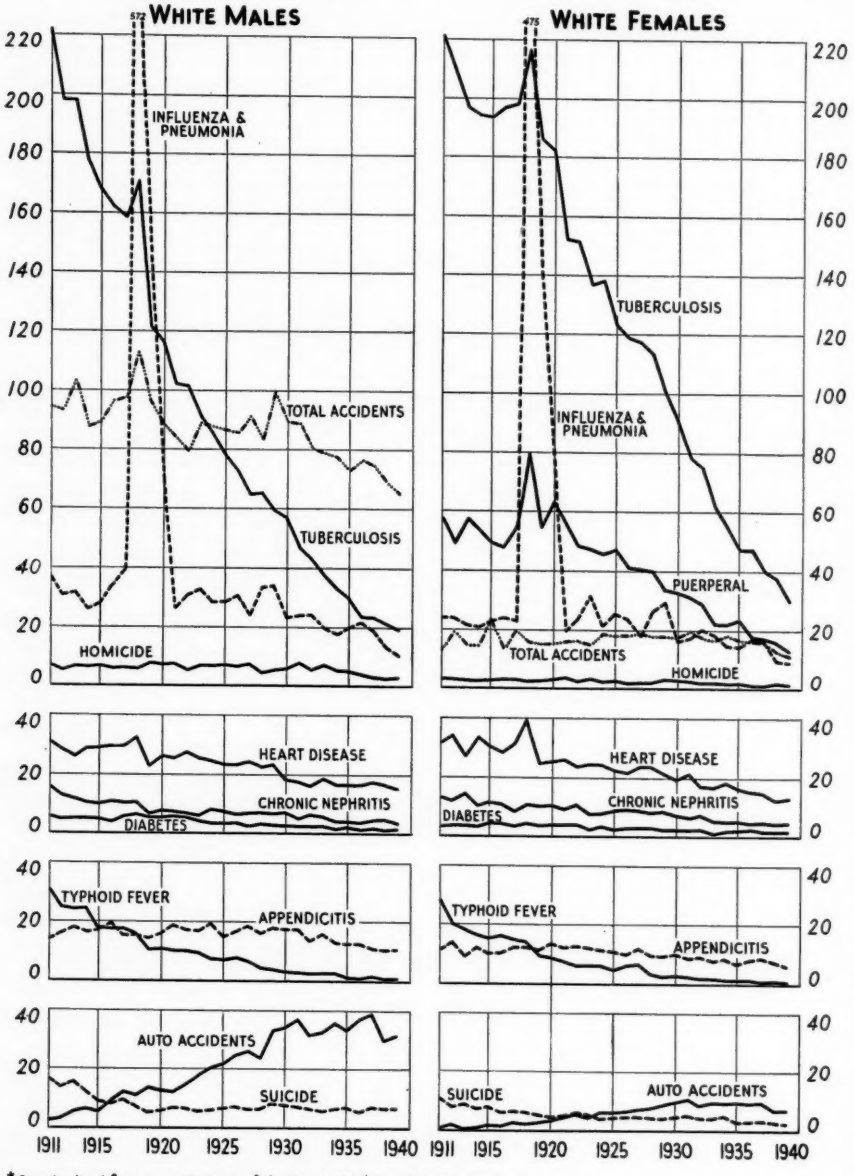
In the mortality from accidents (all forms), the general tendency has been downward, particularly since 1929. The death rate for white males dropped from 94.3 per 100,000 in 1911 to 64.9 in 1939; for females, it fell from a peak of 23.5 per 100,000 in 1915 to 11.5 in 1939. The death rate from automobile accidents, however, was on the upgrade for most of the period, especially for males; only the last two years, 1938 and 1939, showed substantial improvements over the previous trend. Among white males of ages 15 to 24, automobile accidents accounted for one sixth of the deaths from all causes in recent years and ranked ahead of tuberculosis since 1934. For females of these ages automobile fatalities constituted only about one twentieth of all deaths in 1939.

The curves for influenza and pneumonia present striking evidence of the havoc wrought by the epidemic of 1918 among adolescents and young adults. In that year the death rate from this cause for white males was 572 per 100,000, or 15 times the rate in 1917; for white females it was 475, or 20 times the rate in 1917. In the years from 1921 to 1929 the death rate hovered around 30 for white males and 25 for white females. A marked improvement was witnessed in the last decade, particularly the years since 1936. In 1939 the death rates per

*The division of the chart into panels was made merely to separate death rate curves which otherwise would intertwine inconveniently. It has no other significance.

MORTALITY IN ADOLESCENCE AND EARLY ADULT LIFE BY CAUSE

Death Rates per 100,000 White Males and White Females, Ages 15 to 24 years*
Industrial Department, Metropolitan Life Insurance Company, 1911 to 1939



*Standardized for age on the basis of the Standard Million of England and Wales, 1901.

100,000 were 10.1 for white males and 8.7 for white females.

In the case of heart disease, the death rate in the ages from 15 to 24 in 1939 was reduced by half since 1911—namely, from 30.7 to 15.5 for white males and from 31.2 to 13.1 for white females respectively. Much of this improvement may be attributed to the greatly reduced incidence of the infectious conditions common to childhood. Chronic nephritis and diabetes mellitus are not important causes of death in this age group. Such as they are, they have undergone a distinct reduction in the period under survey, as the graph shows.

The death rate from typhoid fever at ages 15 to 24 has been reduced from about 30 per 100,000 in 1911 to less than one in 1939. On the other hand, mortality from appendicitis showed a tendency to increase until about the middle 20's, after which a gradual decline set in.

White females of ages 15 to 24 experienced a steady decline in the death rate from diseases of the puerperal state, from 57.6 per 100,000 in 1911 to 12.8 in 1939, except for a severe interruption during the influenza period from 1918 to 1920. Only a minor part of this downward movement must be ascribed to the effect of the declining birth rate. Undoubtedly much of the improvement is a definite result of intensive efforts that have been made to reduce mortality in maternity.

The progress toward lower mortality in adolescence and early adult life has so far been noteworthy. However, there is ample room for further improvement by still more adequate control of tuberculosis, by the prevention of accidents, by the elimination of the many infectious diseases of childhood which lead to heart disease, by the more widespread use of modern therapies in pneumonia, and by better care in the conditions which give rise to diseases of the puerperal state.

Our World's Fair Exhibit

THE Metropolitan Life Insurance Company cordially invites readers of the STATISTICAL BULLETIN to attend its exhibit in the Business Systems and Insurance Building, New York World's Fair, which will close on October 27, 1940.

Attention is also drawn to the Medical and Demographic Exhibits in the Hall of Man, sponsored by a group of Life insurance organizations, including this Company.

Health Record for August 1940

A SLIGHT rise in mortality was experienced by the Industrial policyholders during August, when a death rate of 7.4 per 1,000 was recorded as against a rate of 7.0 in July. The August rate, however, cannot be considered unfavorable for this season of the year, since in only three previous years during the last two decades has the mortality rate for that month fallen below that of August just past. A somewhat similar situation was noted in the reports for 88 major cities of the country. Although the total number of deaths reported by these cities exceeded the figure for August a year ago, the death rate was well below the average for the same month during the three-year period 1937–1939.

The year-to-date death rate among the insured, for the January-to-August period, 7.9 per 1,000, is identical with that for the like part of 1939.

Judging by the experience of the Industrial policyholders, the rise of mortality over that registered in August of last year was attributable mainly to the chronic diseases of old age, such as cerebral hemorrhage, diseases of the coronary arteries, diseases of the heart, and chronic nephritis. These, together with accidents, accounted for nearly 90 percent of the recent increase.

In the general population of the country there was less illness from scarlet fever, smallpox, and whooping cough than was reported in either July of the current year or in August a year ago. The usual seasonal increase in typhoid was noted, but the total cases reported were fewer than those in August 1939. On the other hand, the prevalence of poliomyelitis more than quadrupled in August, and the disease was more widespread than is usual even at this season of the year. Only three States and the District of Columbia escaped entirely a visitation from poliomyelitis in August. The States in which the disease was chiefly concentrated were Michigan, Indiana, Ohio, Iowa, Kansas, and West Virginia.

Among the items of special public health interest recently reported are the following:

Consistent with the mobilization-for-defense program, the New York City Department of Health has started to train physicians to combat venereal disease. Regular clinical courses and daily lectures will be given for the benefit of physicians in the Army, Navy, Marine Corps, National Guard, and Coast Guard. This program will be under the auspices of the Health Department in cooperation with the Chief Surgeon of the National Guard and the Regional Director of the United States Public Health Service.

The Julius Rosenwald Fund has made possible a project to X-ray for unrecognized tuberculosis 30,000 Negroes registered with the Provident Hospital Clinic in Chicago.

The following table shows the mortality among Industrial policyholders for August 1940, July 1940, and August 1939, together with the death rates for the first eight months of each year.

METROPOLITAN LIFE INSURANCE COMPANY

Death Rates per 100,000 Policyholders from Selected Causes. Industrial Department. Weekly Premium-Paying Business*

Causes of Death	Annual Rate per 100,000 Policyholders*				
	August 1940	July 1940	August 1939	Year to Date: End of August	
				1940	1939
All Causes—Total	736.6	695.0	692.2	787.0	790.8
Typhoid fever	1.3	.9	.9	.6	.6
Measles	.6	.4	.1	.5	.8
Scarlet fever	.3	.3	.3	.6	.8
Whooping cough	1.0	1.0	1.5	1.3	1.7
Diphtheria	.8	.2	.9	.8	1.1
Influenza	2.0	2.2	1.8	9.4	12.2
Pneumonia (all forms)	21.1	19.8	17.6	40.5	50.0
Tuberculosis (all forms)	41.9	44.8	41.0	45.8	46.1
Tuberculosis of respiratory system	37.8	39.8	36.4	41.3	41.4
Syphilis	10.6	8.6	9.5†	11.7	11.2†
Cancer (all forms)	98.5	100.1	99.6	102.1	100.2
Diabetes mellitus	25.6	24.0	25.3	29.8	28.1
Cerebral hemorrhage	59.9	54.3	54.7	62.5	61.0
Diseases of the coronary arteries	44.2	45.5	34.7	49.7	39.7
Angina pectoris	1.7	2.6	4.5	3.1	6.5
Diseases of the heart (other forms)‡	142.6	131.5	135.6	163.5	165.4
Diarrhea and enteritis	5.3	5.2	7.6	4.1	5.1
Appendicitis	10.1	9.6	12.1	9.1	10.2
Chronic nephritis	49.7	47.0	44.5	58.0	52.5
Puerperal state—total	5.9	4.3	6.0	4.9	5.6
Suicides	7.8	7.5	9.0	8.3	8.5
Homicides	5.1	3.6	4.3	3.6	4.3
Accidents—total	62.1	52.7	50.0	46.4	45.6
Home accidents	9.6	7.9	8.6	11.7	12.1
Motor vehicle accidents	18.6	19.6	18.1	16.4	16.6
Automobile accidents§	16.9	18.5	17.3	15.3	15.6
All other causes of death	138.5	128.8	130.7	130.9	133.4

*The rates for 1940 are subject to slight correction, since they are based on provisional estimates of lives exposed to risk.

†Excludes aneurysm of the aorta.

‡Excludes pericarditis, acute endocarditis, and acute myocarditis.

§Excludes collisions between automobiles and railroad trains or streetcars.

Correspondence on the subjects discussed in these Bulletins may be addressed to: The Editor,

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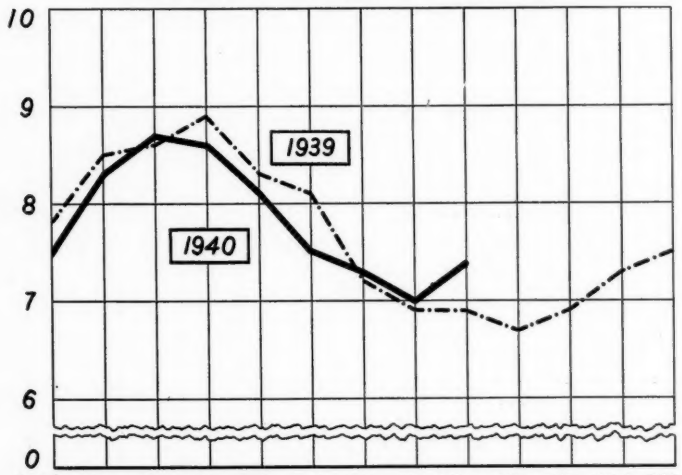
MORTALITY FROM ALL CAUSES

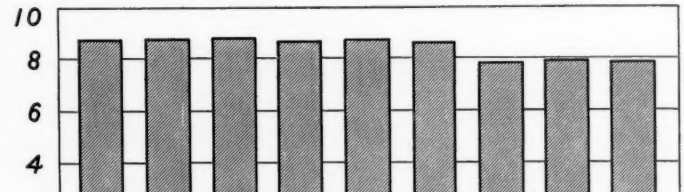
METROPOLITAN LIFE INSURANCE COMPANY
DEATH RATES PER 1,000 POLICYHOLDERS - ANNUAL BASIS
INDUSTRIAL DEPARTMENT - WEEKLY PREMIUM-PAYING BUSINESS

DEATH RATES BY MONTHS: 1939 AND 1940



(DEC)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1939	8.5	8.6	8.9	8.3	8.1	7.2	6.9	6.9	6.7	6.9	7.3	7.5
1940	8.3	8.7	8.6	8.1	7.5	7.3	7.0	7.4				

DEATH RATES FOR JANUARY TO AUGUST, 1932-1940



Rates for 1940 are provisional.

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